ABSTRACT

An objective of this invention is to provide a method for detecting DNA polymorphism that has high sensitivity and efficiency and does not need long DNA searching region.

A homologous recombination protein RecA makes partial triple strand DNA from target double DNA and oligonucleotide probe complementary to the DNA. The triple strand DNA maintains stable triple strand DNA after RecA protein is removed. The present inventors found that the thermostability of triple strand DNA changes greatly when there is a mismatch between target DNA and oligonucleotide probe because of the existence of polymorphism in the target DNA. Utilizing this change of thermostability, efficient detection of polymorphism in labeled DNA is possible by examining whether oligonucleotide probe is released and the triple strand DNA is solved after heat treatment of triple strand DNA formed using homologous recombination protein.